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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/593,581

01/31/2007

Adi Shechtman

1596-US

1496

24505

7590

02/13/2008

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EXAMINER

SZMAL, BRIAN SCOTT

ART UNIT

PAPER NUMBER

3736

MAIL DATE

DELIVERY MODE

02/13/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,581	Applicant(s) SHECHTMAN ET AL.	
	Examiner Brian Szmal	Art Unit 3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/20/06</u> . | 6) <input type="checkbox"/> Other: ____. |

Claim Objections

1. Claim 18 is objected to because of the following informalities: In line 3, "rectangular said element" appears it should read as "said rectangular housing" in order to be grammatically correct. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 4, 6-9 and 11-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Leitner et al (6,500,131 B2).

Leitner et al disclose a contour mapping means for analyzing the spine and further disclose an inclination tracking device configured to pass over the object whose angle of inclination is to be mapped, the object having a plurality of elements; a sensor probe in communication with the inclination tracking device, the sensor probe configured to sense the position of each of the plurality of elements; the object to be mapped is the spine of a person and the elements are vertebrae; the sensor probe is fixed in relation to the inclination tracking device; the sensor probe further comprises a position sensor and tracking system in communication therewith; the inclination tracking

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device comprises one of a group of devices for calculating the angles of inclination including gyroscopic inclinometer device, inclinometer, accelerometer, a magnetic field generator and Optical 3D tracking systems; the inclination tracking device comprises a processing unit and at least one of a group of devices including a data storage device and a display screen in communication with the processing unit; the inclination tracking device further comprises a transmitting device for transmitting data to an external source; the sensor probe is configured to record at least one reading for each vertebrae; the processing unit is programmed to record data including maximal trunk rotation measurements of at least one of group of vertebrae, including the upper thoracic, mid-thoracic, and lumbar regions of the spine; the processing unit is programmed to compute and display the data showing at least one of a group including Coronal, Sagittal and Apical views of the spine; the processing unit is programmed to compute and display the maximum inclination and/or location of the vertebrae in each of the upper thoracic, lower thoracic and lumbar regions of the spine; the sensor probe is configured to record at least one of a group comprising the vertebral level of the trunk rotation measurements, the direction of inclination of each vertebrae, the difference in height between left and right of each vertebrae and the length of the spine; the inclination measuring device is configured to measure the angular deviation irrespective of the position of object being measured; the inclination tracking device comprises a substantially rectangular housing having an indentation formed in the center of one edge of the housing; the inclination tracking device comprises a pair of tracking devices attached on either side of the indentation, along the bottom edge of the rectangular

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housing; and the inclination tracking device comprises markers configured to be used in conjunction with the Optical 3D tracking systems to identify and calculate inclination angles of the vertebrae. See Figures 1, 2, 6 and 7; Column 3, lines 16-40 and 56-67; Column 4, lines 1-19; Column 5, lines 40-64; and Column 6, lines 38-44.

4. Claims 1, 2, 6-9, 11-16 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Shechtman et al (2005/0148839 A1).

Shechtman et al disclose a means for measuring a spinal deformity and further disclose an inclination tracking device configured to pass over the object whose angle of inclination is to be mapped, the object having a plurality of elements; a sensor probe in communication with the inclination tracking device, the sensor probe configured to sense the position of each of the plurality of elements; the object to be mapped is the spine of a person and the elements are vertebrae; the sensor probe further comprises a position sensor and tracking system in communication therewith; the inclination tracking device comprises one of a group of devices for calculating the angles of inclination including gyroscopic inclinometer device, inclinometer, accelerometer, a magnetic field generator and Optical 3D tracking systems; the inclination tracking device comprises a processing unit and at least one of a group of devices including a data storage device and a display screen in communication with the processing unit; the inclination tracking device further comprises a transmitting device for transmitting data to an external source; the sensor probe is configured to record at least one reading for each vertebrae; the processing unit is programmed to record data including maximal trunk rotation measurements of at least one of group of vertebrae, including the upper thoracic, mid-

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thoracic, and lumbar regions of the spine; the processing unit is programmed to compute and display the data showing at least one of a group including Coronal, Sagittal and Apical views of the spine; the processing unit is programmed to compute and display the maximum inclination and/or location of the vertebrae in each of the upper thoracic, lower thoracic and lumbar regions of the spine; the sensor probe is configured to record at least one of a group comprising the vertebral level of the trunk rotation measurements, the direction of inclination of each vertebrae, the difference in height between left and right of each vertebrae and the length of the spine; the inclination measuring device is configured to measure the angular deviation irrespective of the position of object being measured; and the inclination tracking device comprises markers configured to be used in conjunction with the Optical 3D tracking systems to identify and calculate inclination angles of the vertebrae. See Figures 3 and 4; and Paragraphs 0042-0045.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leitner et al (6,500,131 B2) as applied to claim 1 above, and further in view of Wada et al (2005/0020942 A1).

Leitner et al, as discussed above, disclose a means for mapping the contour of a person's spine, but fail to disclose the sensor probe is fixed in relation to the inclination tracking device; and the sensor probe is configured to be removable from the inclination tracking device and is configured to be attachable to at least one finger of a user's hand.

Wada et al disclose a spinal column measurement means and further disclose the sensor probe is fixed in relation to the inclination tracking device; and the sensor probe is configured to be removable from the inclination tracking device and is configured to be attachable to at least one finger of a user's hand. See Paragraphs 0022-0024.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the means of Leitner et al to have the sensor probe fixed in relation to the tracking device and have the sensor probe be removable from the tracking device and attachable to a finger, as per the teachings of Wada et al, since it would provide a means of accurately tracking the position of the sensor while providing an assembly that is small enough to fit on a finger of a user.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leitner et al (6,500,131 B2) as applied to claim 1 above, and further in view of Peckham et al (5,167,229).

Leitner et al, as discussed above, disclose a means for measuring the contour of a person's spine, but fail to disclose the inclination tracking device comprises an inductor in communication with the processing unit for supplying power via a wireless connection to a unit for recharging the inclination measuring device.

Peckham et al disclose a neuromuscular stimulation system and further disclose the inclination tracking device comprises an inductor in communication with the processing unit for supplying power via a wireless connection to a unit for recharging the inclination measuring device. See Column 7, lines 39-46.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the means of Leitner et al to include a wireless means for recharging the device, as per the teachings of Peckham et al, since it would provide a means of recharging the device while the device is in use.

8. Claims 4, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shechtman et al (2005/0148839 A1) as applied to claim 1 above, and further in view of Leitner et al (6,500,131 B2).

Shechtman et al, as discussed above, disclose a means for measuring a deformity of a person's spine but fail to disclose the sensor probe comprises optical sensors; the inclination tracking device comprises a substantially rectangular housing having an indentation formed in the center of one edge of the housing; and the inclination tracking device comprises a pair of tracking devices attached on either side of the indentation, along the bottom edge of the rectangular housing.

Leitner et al, as discussed above, disclose a means for measuring the contour of a person's spine and further disclose the sensor probe comprises optical sensors; the inclination tracking device comprises a substantially rectangular housing having an indentation formed in the center of one edge of the housing; and the inclination tracking device comprises a pair of tracking devices attached on either side of the indentation,

along the bottom edge of the rectangular housing. See Figures 1, 2, 6 and 7; Column 3, lines 16-40 and 56-67; Column 4, lines 1-19; Column 5, lines 40-64; and Column 6, lines 38-44.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the means of Shechtman et al to include the use of optical sensors and the tracking device comprises a rectangular housing, as per the teachings of Leitner et al, since it would provide a means of measuring the contour of the body without contacting the body while the housing is in a shape that can be grasped by a user's hand.

9. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shechtman et al (2005/0148839 A1) as applied to claim 1 above, and further in view of Wada et al (2005/0020942 A1).

Shechtman et al, as discussed above, disclose a means for mapping the contour of a person's spine, but fail to disclose the sensor probe is fixed in relation to the inclination tracking device; and the sensor probe is configured to be removable from the inclination tracking device and is configured to be attachable to at least one finger of a user's hand.

Wada et al disclose a spinal column measurement means and further disclose the sensor probe is fixed in relation to the inclination tracking device; and the sensor probe is configured to be removable from the inclination tracking device and is configured to be attachable to at least one finger of a user's hand.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the means of Shechtman et al to fix the sensor probe in relation to the tracking device and the sensor is removable from the tracking device, as per the teachings of Wada et al, since it would provide a means of accurately tracking the position of the sensor while providing an assembly that is small enough to fit on a finger of a user.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shechtman et al (2005/0148839 A1) as applied to claim 1 above, and further in view of Peckham et al (5,167,229).

Shechtman et al, as discussed above, disclose a means for measuring the contour of a person's spine, but fail to disclose the inclination tracking device comprises an inductor in communication with the processing unit for supplying power via a wireless connection to a unit for recharging the inclination measuring device.

Peckham et al disclose a neuromuscular stimulation system and further disclose the inclination tracking device comprises an inductor in communication with the processing unit for supplying power via a wireless connection to a unit for recharging the inclination measuring device. See Column 7, lines 39-46.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the means of Shechtman et al to include a wireless means for recharging the device, as per the teachings of Peckham et al, since it would provide a means of recharging the device while the device is in use.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Szmál whose telephone number is (571)272-4733. The examiner can normally be reached on Monday-Friday, with second Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian Szmál/
Primary Examiner, Art Unit 3736